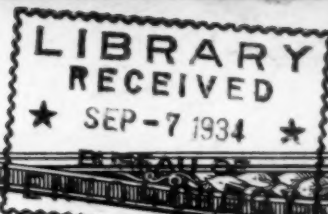


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AMERICAN NURSERYMAN

Chief Exponent of the American Nursery Trade

Vol. LX No. 4

AUGUST 15, 1934

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AMERICAN NURSERYMAN PUBLISHING CO.

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AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

F. R. KILNER, Editor
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EDITORIAL communications on subjects
connected with nurseries, arboriculture or
other phases of commercial horticulture are
welcomed by the editor. Also articles on the
subjects and papers prepared for conventions
of nursery associations.

THE SUPPLY OF STOCK.

Data concerning the available supplies
of nursery stock of various classes at
the present time, and the prospects for
the coming year, formed one of the most
interesting parts of the discussion on the
marketing agreement at the New York
convention and the subsequent hearing
last month. Further observations and
comments on the subject appear in this
issue from L. C. Chadwick, in conse-
quence of his tour of nurseries in the
eastern half of the country recently. He
affirms what was asserted at New York,
that conditions of supply in themselves
favor a trend upward in prices. His
comments should, however, be read care-
fully by any nurserymen who have the
idea that by propagating heavily they
are going to be in position to reap a
rich harvest. Present plantings which
are being overgrown from weeds reflect
such an ambition in past years, result-
ing in loss rather than a harvest at all.

Undoubtedly considerable propagation
may be done in certain lines before a
normal amount of stock is available. But
the rapid-growing subjects which are
turned into salable merchandise in a sea-
son or two may speedily be overdone if
too many nurserymen get the same idea

The Mirror of the Trade

at the same time and seek to go into
production in a big way.

It has been said more than once that
much of the surplus in nursery stock
from season to season has been the re-
sult of individuals' producing in whole-
sale quantities without any established
market for their products. Such indi-
viduals are merely speculating. This does
not apply to nursery firms which grow
given quantities of stock for their own
sale, or for sale through outlets on which
they reasonably depend. Such firms are
likely to gauge their market with rea-
sonable accuracy.

Whether or not there is a national
marketing agreement or regional coop-
erative agreements, individual nursery-
men ought to recognize at this time the
necessity of care and judgment in mak-
ing plantings. Study your own market
and the fair prospect for increase and
gauge production accordingly. Only thus
can the individual nurseryman, and the
industry as a whole, proceed on a sound
and stable basis, instead of being sub-
ject to wide fluctuations of supply from
year to year.

AN AMPLE MARKET.

One of the illogical phases of current
economic procedure is the determined at-
tempt to restrict production of food
items, principally wheat among them, at
a time when many persons go hungry for
bread. Equally illogical, though perhaps
not so tragic, is the difficulty of nurs-
erymen to move their trees and shrubs
at a time when many homes are barren
of plantings of any kind.

Whatever the current condition of the
industry, there is no gainsaying that the
future of horticulture in this country
contains almost boundless possibilities.
When one surveys the verdant, thor-
oughly planted residential areas in the
eastern part of the country, settled for
300 years, or has a vision of such sim-
ilar areas in Europe, one cannot but an-
ticipate the planting of millions of
homes in the sections whose history of
settlement by white men runs back no
more than fifty or 100 years—scarcely
long enough to do more than break
ground and get an existence established.

The time will come when they, too, will
be beautified with growing things.

One sometimes wonders if the nursery-
men of the country are as certain of
this as they should be in order to impart
the necessary enthusiasm to the public
to promote such plantings. Time will
do much for us, but still more can be
done by more energetic effort on the part
of nurserymen to make sales by devel-
oping new buyers, by increasing public
interest in plants of all kinds. Prog-
ress is easy in a boom period, when there
is plenty of spending money. More dili-
gent work is required when the dollar
for nursery stock must be separated from
that which may go for travel, for gaso-
line, for movies or other interests, tem-
porarily absorbing, but not more divert-
ing and valuable in the long run than
well planted home surroundings.

CODE COMMITTEE EXPENSES.

Inasmuch as the committee of five
nurserymen who drafted the code and
marketing agreement submitted to the
trade have been formulating the docu-
ment for the entire industry, the con-
sensus at the New York convention of
the American Association of Nursery-
men was that their expenses should be
borne by the industry as a whole, not
considered an obligation of the organ-
ization only, though it has already ad-
vanced the major part of the commit-
tee's expenses. The efforts to obtain
funds to meet the committee's expenses
were not so successful at New York as
had been desired. Nurserymen who
have not subscribed to the code com-
mittee's expenses, therefore, are asked
to send what they wish to contribute
to Charles Sizemore, secretary-treasurer
of the American Association of Nurs-
erymen, P. O. Box 355, Louisiana, Mo.

In an appeal to the nurserymen of the
country, Mr. Sizemore has included the
following statement:

"The code committee of five repre-
sentative nurserymen of the association has
been compelled to go to Washington on
several occasions with the result that the
expenses have been rather high. At this
time we believe the expenses have run
to in the neighborhood of \$4200, of which

(Concluded on page 6.)

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AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

Vol. LX

AUGUST 15, 1934

No. 4

Hedge Plants on Trial

**Reports on Species in Test Collection
at Morton Arboretum for Three Years**

In the spring of 1931 the Morton arboretum at Lisle, Ill., began an experimental hedge project to determine the plants most adaptable for hedge use in that locality, near Chicago.

Hedges of fifty-four materials were set out as the nucleus of the planting. They were each made twenty-five feet in length and were planted in rows so that they might be easily viewed and studied from the intervening grass paths. Since then additions have been made to the group at various times, until at present the number of hedges totals 109.

With a few exceptions these are all being trained formally and receive close clipping at regular intervals. It is the intention to introduce informal hedges of the same species, however, so as to afford ready comparison between the naturalistic and formal treatments of the same materials.

None of the hedges have been established sufficiently long to enable the arboretum to give a definite estimate of their value, but inasmuch as circumstances have arisen which may make it necessary to relocate the entire collection, it was decided to publish in the bulletin notes on the individual behavior to date of about ninety varieties.

Hedges of Exceptional Merit.

Of these varieties, some were marked as hedges of merit and some as hedges of exceptional merit. Descriptions of the hedges of exceptional merit are given as follows:

Berberis Thunbergii, Japanese barberry—This well known species is one of the most satisfactory and widely cultivated deciduous hedge plants. Its compact habit, firm texture and small foliage fit it perfectly for this use.

Cotoneaster lucida—Forms a dense, even hedge of bright shiny green. Has proved perfectly hardy and quite resistant to drought.

Eleagnus angustifolia, Russian olive—Of neat outline and well branched, but open in several places on the east side. Foliage color good, gray to grayish green.

Physocarpus intermedius parvifolius, small-leaved Illinois ninebark—This is one of the best hedges in the entire collection. Its fine-textured, bright green foliage, crowded upright habit of growth

and ability to withstand close clipping adapt it remarkably well for hedge use.

Physocarpus monogynus—Equally good is this neat, lower-growing species. It is of similar habit and has just as dense fine-textured, bright yellow green foliage. It is particularly desirable because of the fact that it is so well clothed around the base.

Populus Simonii, Simon poplar—Slender, fastigate branchlets and bushy, comparatively small, lustrous, deep green leaves give this poplar the qualifications of a good hedge plant.

Ribes alpinum, mountain currant—This firm, densely branched, neat-appearing hedge of medium green is one of the most satisfactory of them all. It leafs early in the spring and is adorned with pretty scarlet fruits in summer and autumn.

Shepherdia argentea, silver buffalo-berry—Judging from present indications, this species will in time develop into an ideal hedge. Its silvery gray foliage is already dense, although it does not entirely clothe the base of the plants. The branches are spiny.

Syringa vulgaris, common lilac—Surprising as it may seem, this common lilac has made one of the best hedges in the entire collection. Responding perfectly to training and close clipping, it has developed in three years into a neat hedge of unusual density. Only the slight coarseness of its large, deep green foliage and its susceptibility to scale can detract from its value as a hedge material.

Taxus cuspidata, Japanese yew—For this locality the Japanese yew solves the evergreen hedge problem most satisfactorily. Its rich, dark green foliage is full of character and may be sheared into almost any form. It is slow-growing, however.

Thuja occidentalis, American arbor-vitae—After the disastrous results of the past dry winter, there is hesitancy in recommending arbor-vitae for hedge use. Where it has sufficient moisture it is most desirable and may be counted on to form a dense, bushy wall of deep green. Drought and dry winds are extremely detrimental to its growth, though, and often result in alarming fatalities.

Ulmus pumila, Chinese elm—From every indication this comparatively new species is destined to become a hedge plant of exceptional worth. It possesses

the necessary density of habit, diminutive foliage and rich bright green color and has the additional advantage of holding its foliage until late in the fall.

Hedges of Merit.

The plants designated as making hedges of merit include the following:

Carpinus Betulus, European hornbeam—A well shaped hedge of dense, compact habit; pleasing bright green in color.

Cotoneaster acutifolia, Peking cotoneaster—Has developed into a good-looking, evenly branched hedge of deep glossy green. Foliage small. Withstands pruning well. Prefers good drainage.

Evonymus europæa, European evonymus—Fairly dense, except at base, which is inclined to be bare. The effect of the extremely dark green foliage is pleasing, even though coarse in texture.

Lonicera bella albidia, white belle honeysuckle—A hedge of unusual neatness and density. Foliage dark green.

Lonicera Xylosteum—Neat and dense; more attractive than the above, but has more coarse foliage. It is deep green in color.

Prunus tomentosa, Nanking cherry—Though open in places, it has made a good-looking, firm hedge of light green. It stands clipping well and will undoubtedly continue to improve as it becomes older.

Rhamnus Frangula, glossy buckthorn—Its glossy green, insect and disease-resistant foliage is its most valuable asset. It is fairly close-growing, too, and while open in places, is clothed with foliage near to the ground. In addition to its good foliage, it produces decorative fruits in midsummer. They change from red to purplish black.

Salix pentandra, laurel willow—Under ordinary conditions it is an attractive, densely branched hedge of lustrous bright green with the losing of its leaves in the fall its only drawback.

Syringa chinensis, Chinese lilac—Habit of growth rather loose and open; foliage small. This species would probably make a more worth-while informal or unclipped hedge. It is very floriferous.

Syringa persica, Persian lilac—Very similar to the above, although a bit more refined in every respect.

Wisconsin Arboretum

Tract of 500 Acres Near Madison, Wis.,
to Be Devoted to Study and Research

The University of Wisconsin arboretum and wild life refuge recently dedicated at Madison, Wis., contains over 500 acres. It lies just to the south and west of Lake Wingra, a beautiful spring-fed lake, and is within sight and walking distance of Madison, the University of Wisconsin and the state capitol. The land was obtained with no cost to the state.

The arboretum has wonderful possibilities for study and research. The nature of the area is such that a wide variety of material can be grown. The terrain varies from good-size hills to open prairie, marsh, stream margin and lake shore. There are numerous exposures and a variety of soils. Many of the springs which feed Lake Wingra are on the arboretum. The flow of some of these is strong enough to cause small streams. These and the lake give ample opportunity for water gardens and the study of water plants, water birds, water insects and fish. The area is at present a favorite collecting ground for students of entomology.

Development Begun.

Considerable work was done last year by relief and C.W.A. labor to make the area more available and useful for study. A graveled road has been about completed through the arboretum. The area has been fenced, except for some newly acquired land. The springs have been cleaned out and a natural stone council seat has been constructed near one of them for the use of classes and other groups. About 15,000 evergreen transplants were set out last spring, and 100 good-size specimen evergreens were planted last fall. The transplants were white pine, red pine and white spruce. The specimens were of several varieties.

Two pools have been built. One is out in the open meadow or prairie. This is to be used as an open meadow pool, with the flora of the open pool. The other pool is in the lower marshy area, surrounded by peaty soil. This is to be developed as a natural bog or tamarack pool. About 2,000 tamaracks were planted around this pool last winter. Work on moving them was started right after Christmas with frozen balls of earth or, rather, layers of peat around their roots. They came from a tamarack swamp near Cambridge. The plants have a flat root system, growing the way they do in peat right above the water level. The men went in with frost bars or old axes and cut a circle in the frozen peat around the tamarack it was wished to move; they then lifted the tree, and along with it came a 6 or 8-inch layer of frozen peat containing the roots of the tree and various bog plants. The specimens were then moved in and planted around the pool in the arboretum in the same manner as they came out.

The entire arboretum is to be kept as natural as possible. Natural surfaces are being left undisturbed except in some places where it is absolutely necessary to change them for service or safety. The present road, with some

additional service drive, is to be the extent of that type of circulation for the present acreage. There are to be several parking areas, with circulatory paths leading from these to various places of interest.

Plant Associations.

Some acreage will be used to test the hardiness and desirability of trees and shrubs for Wisconsin and the midwest, but most of the plantings will be in the nature of natural ecological groupings. Here one can learn the natural environment of a plant, as well as its name. There is already a good oak woods in the arboretum, with some of the wild flowers usually found. Other wild flowers and shrubs found together in that type of environment will be planted. There will also be a hard maple woods and a white birch woods. The red and white pine transplants were the start toward red and white pine associations, and the white spruce transplants a start toward a white spruce association.

The tamarack moved in last winter was planted in a natural group around the bog pool; with it will be such plants as the red osier dogwood, the pussy willow, the pitcher plant, cotton grass, showy orchids, etc. To the southeast of the tamarack pool is a sandy rise; there will be the jack pine, with other plants one would naturally find with it. To the north of the tamarack association, blending into it, will be the arbor-vitæ association. On the rise to the west of this will be the juniper association. To the east of the oak woods, along the creek, will be the hemlock association. The arboretum also has an extensive marsh, with good natural marsh flora.

It is also planned to have some outstanding plant groups from other places in the United States. Associations such as one would find in the Ozarks, including the tulip tree, the redbud, the fragrant sumac and the sassafras, or in the Kibab forest along the north rim of the Grand canyon in Arizona, where one finds such trees as the western yellow pine, the white fir, Douglas fir and the Colorado spruce. There will probably be other associations, such as one finds in the Black hills, in the northern Rockies in Montana and in the Green mountains of the east.

Prairie a Feature.

It is also planned to have another feature a little unique for arboretums, a prairie. There is already an open prairie of about ninety acres. At present this has as good a selection of prairie flora as can be found in this section of the country. This area is to be let alone, except for the introduction of other native prairie material. It is also hoped to get the prairie chickens to stay here. The prairie is about in the center of the arboretum and will be bordered by some of the Wisconsin association. The various groupings will blend from trees to shrubs to open prairie. This will give a person the

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chance to see the groupings from the woods margin, where trees branch low to the ground. Here, also, individual trees can be brought out into the open, so one will be able to see the character of a tree as it stands by itself.

The arboretum is already being used as an outdoor laboratory by students of botany, engineering, entomology, landscape design, soils, zoölogy and other courses. Surveys of the plants found in the area are being made by botany students, soils surveys have been made by soils students and a topographic map has been made of the area by students in engineering. The arboretum is also a source of good practical design and construction problems for students in landscape design.

CONNECTICUT SURVEYS ELMS.

To Combat Dutch Elm Disease.

In view of the alarming increase in the number of elms stricken with Dutch elm disease in New York and New Jersey this season, Connecticut has adopted a program looking toward control of the disease within its borders. William L. Slate, director of the Connecticut agricultural experiment station, at New Haven, presented to Governor Wilbur L. Cross last week a statement on the present status of the disease and plans for immediate state action.

The report was drawn up by G. P. Clinton, station botanist, and W. O. Filley, station forester, who will be in charge of the work, and was approved by the governor. As a result, six trained men have set out to make a systematic survey of the elms of the state. Starting in parties from New Haven and from Stamford, they will study the condition of the trees and the presence of the elm bark beetle, said to be the carrier, and will send specimens of suspicious trees to the station laboratory at New Haven for examination. In Fairfield county the present intensive search for diseased elms will be continued under federal supervision with state and local coöperation. State forces will cover territory not included in the federal survey.

To date the total number of trees confirmed with disease in Connecticut is thirty-six. Two of these were found last winter near Greenwich, where the disease probably entered the state. The rest have been located recently in Greenwich, Stamford, Darien and Norwalk, all towns in Fairfield county adjacent to badly affected Westchester, N. Y.

FORTMILLERS' NEW NURSERY.

An announcement of the birth of a daughter to Mr. and Mrs. Paul Fortmiller, of the Jackson & Perkins Co., Newark, N. Y., reads as follows:

"Leta and Paul Fortmiller announce the establishment of a new nursery, having taken into junior partnership Lola Gallup Fortmiller on July 30, 1934. Lola has been associated with the firm the better part of a year and the original partners are very happy to make this announcement in partial recognition of her value to the concern."

MICHAEL A. VACCA, owner of the Bradford Nursery, Bradford, R. I., reports that his business has progressed rapidly in the year that it has been in existence.

Catalogue Preparation

Pointers on Preliminary Steps in Preparing Catalogue for Publication

While the styles of nursery catalogues vary considerably, to accommodate sales methods followed by different concerns, there are certain preliminary steps in the handling of material and selecting the most economical form that are worth regular consideration in issuing trade lists of all kinds.

First, if bids are secured from competing printers, obtain from each the range of sizes that can most economically be produced in the respective establishments and a price for each size.

As the number of pages will vary somewhat, a computation based on the square-inch unit will readily enable the nurseryman to estimate if his requirements can be met. This is particularly desirable if the catalogue is to be produced on rotary press equipment. Surprising savings can sometimes be effected when a fixed size is not essential and advantage can be taken of equipment producing a size different from that previously used.

At the same time, provide bidders with a typical type page and request a set-up from each for comparison and also to determine the exact page size to be produced in the catalogue. Possible delay and disappointment at the time actual production is started will thus be eliminated.

Illustrations.

As illustrations play a large part in presenting the plants for sale, it will prove advantageous to check both the half tones on hand and the new photographs as follows:

Have the catalogue printer check all half tones for screen and quality. After a period of years, if engravings have been printed from direct and, to a lesser extent, after repeated molding for printing plates, any cut will show wear that is directly reflected in poorer printed appearance. Furnish the printer with samples of stock actually to be used in the forthcoming catalogue and, where possible, have him etch the worn half tones in order to secure greater depth of screen. As this is a relatively inexpensive operation, the expenditure is well worth while, considering the greater detail and contrast acquired in the printed result. When the half tones are worn beyond possibility of repair by etching, it is best to replace them with new cuts.

In this connection, have all half tones checked, to see that screen grade is suitable for the type of paper being used for the catalogue. Either too fine or too coarse a screen is bad, and it might be well arbitrarily to eliminate those cuts with screen farthest removed from the desired standard.

Choose only those photographs with sharp definition of detail and backgrounds that contrast in no uncertain manner with the subject. As a rule, the engraver cannot be expected to improve the general appearance of a photograph in the finished half tone. While it is true that retouching will aid considerably, it means an extra charge and, where extensively used, costs more than the increased quality in printing war-

rants. Another drawback to retouching is the difficulty of preventing the artificiality from being apparent.

Copy and Layouts.

The handling of copy and page layouts plays a highly important part, both for the nurseryman and the printer, in producing a good-quality catalogue economically and quickly. If at all possible, the nurseryman should have the printer furnish him with a dummy of the proper number of pages for the body of the catalogue and at least three proofs of each cut. It will then be possible to make preliminary sketches of pages in the dummy, pasting proofs of the half tones on hand in position. Striking effects in facing pages and in groups of pages can be secured by this method. As the dummy is only for the nurseryman's use, it is always available and forms a permanent record, both of progress and of the exact contents of the catalogue.

The printer should always be furnished with layouts of one page each, accompanied by typewritten copy on one side of the sheet only. Endeavor to put all copy on typewritten sheets, includ-

ing all display lines. The layouts themselves need only have the cuts pasted in position and the display lines lettered. While this may appear as unnecessary work to the nurseryman, certain definite advantages will be derived. In the first place, the final check on appearance, prices and general arrangement will be made easier. In the second place, the printer will have no excuse for deviating from the layout or for omitting copy or transposing items on the page. In this connection, it may be pointed out that careful layout and copy arrangement will keep alterations to a minimum, which is certainly greatly to be desired.

The layouts should also show by means of simple pencil line divisions the amount of space to be devoted to the various plants. The printer cannot be expected to know this, and too often expensive alterations are incurred by receiving a first proof with items absolutely reversed as to importance.

Considerable thought on style will prove beneficial, and as style itself is a matter of opinion, the type dress finally decided on should be arrived at by having a complete page set up and submitted by the printer. It is always well to maintain the same general spacing for all pages, and if this does not prove practicable, to segregate the various types in groups. This will result in an orderly appearing catalogue and, if maintained for several seasons, will result in prospective customers recognizing the individual nurseryman's catalogue at a glance.

Washington Agreement

Pact in Operation in Pacific Coast State

The state of Washington has now a nurserymen's marketing agreement in active operation under authority of the recent enabling act designated house bill No. 180. This agreement has been signed by owners of more than sixty-five per cent of the total volume of nursery stock and fifty-one per cent of the licensed growers, has been approved by the director of agriculture of the state and is under his administration.

Enforcement of rules and regulations adopted by vote of nurserymen and approved by the director is in the hands of the state through the prosecuting attorneys of the various counties. The nurserymen's association elects its own officers for contact, and the state is divided into eight horticultural districts for convenience and assistance by the inspectors for cleanliness as affected by fruit tree pests and diseases and for the enforcement of grade specifications.

The declared policy of the agreement is to maintain fair marketing prices alike to producer and consumer and to discourage the production and marketing of unprofitable classes and varieties of nursery stock. Under the board of directors, minimum wholesale prices and minimum retail prices are designated for each class of nursery stock grown or shipped by members, as based on cost of production and finished to point of shipment or delivery. Production costs are determined by estimating the average actual expense in the efficient and economical nursery, reasonably and well located and fairly cultivated for production in sufficient quantities and

grades, per acre, to make such operation profitable under normal conditions. When for good and sufficient reason any stock should be lower than designated minimum price, the commodity committee will take action accordingly, as provided in by-laws of the association. When changes are made from established minimum prices, three days' notice is required before such changes become binding. Abrogation or general change in the marketing agreement lies with the majority voting power of the association.

Definitions of terms, classification of producers and distributors, terms of sale, ethics in trade practices, guarantees and provisions for adjustments are as generally provided by the various codes and agreements which have appeared in print during the past year.

Nurserymen of the Pacific coast are firmly convinced of the importance of keeping up surveys to determine, so far as possible, prospective conditions of supply and demand and to provide accordingly in planting plans for markets within reach; also that in order to maintain fair price ranges, definitely designated, it is necessary to have definite grade standards to correspond. While legal enforcement of definite values and standards may be regarded as experimental, its influence may be valuable in educating the public to recognize intrinsic values too frequently unobserved and misunderstood by much of the buying public.

C. A. Tonneson, Sec'y,
Pacific Coast Assn. of Nurserymen.

Nursery Conditions in East

**L. C. Chadwick Gives Some Impressions
Received on Recent Trip in Nursery Centers**

Previous to and following the recent convention of the American Association of Nurserymen in New York city the writer had an opportunity to visit a number of the nursery centers in the east. A number of impressions were formed which may be passed on for what they are worth.

In General.

Everywhere the feeling of better conditions existed. The increase in buying activity coupled with the scarcity of many items of stock, especially of the smaller sizes, should lead to a substantial rise in prices in the near future. Ample quantities, even surpluses, of many evergreens of the medium to large sizes exist. There are plenty of sizable deciduous shrubs and trees available, although apparently not to the extent of the evergreens.

Considerable planting of lining-out material has been done this past year and, fortunately, the losses have not been so severe from drought as in the middle west. These plantings seem to run heavily to evergreens, taxus being perhaps the most planted single item. Shrub propagation is again on the increase, but is governed by the immediate demand. Such trends are logical. The better evergreens, which take six to eight or more years to develop into salable material, should be developing. There is no reason why quick-growing material should be planted in excess of that actually moving at a profitable price at the present time.

Propagation.

While on the subject of propagation two other points might be mentioned. First, the use of greenhouses for summer propagation. Since this is a possible practice which I have mentioned before, it was interesting to note the extensiveness of the practice carried out by some of the nurserymen. Many of the houses used for this purpose were of sash construction, practical houses for propagation purposes. With shade provided, softwood cuttings were responding readily. Ericaceous seedlings and potted cuttings kept the houses fairly well filled for this time of year. This practice, besides utilizing the space in the greenhouses, lowers the necessary construction of outdoor frames.

Second, in regard to propagation, the practice of propagation by seed. Outside of ericaceous plants, little propagation by seed was being done at the establishments visited. Although more and more plants are being propagated asexually, there would appear to be ample opportunity of growing many species of evergreen and deciduous plants from seed.

Cultivation Practices.

Cultivation practices differ little from those of other localities. Various types of tilling machines are being found to be useful equipment in nursery practice. Green manure crops to plow under are not used so extensively as in Ohio. Nurserymen are coming to realize that green manure is a satisfactory way of maintaining soil fertility and humus content.

For one who had not had first-hand knowledge of Japanese beetle injury, the extensiveness of its attacks and damage was impressive. Certainly every effort should be made by the investigators to effectuate control measures other than the maintenance of quarantine barriers.

What Plants to Stock.

Nothing would be more valuable to the nurseryman than to give a list of plants which, if propagated at the present time, would sell when they reached a salable size. Such a thing cannot be done. However, certain statements can be made as to the present supply and possible demand of various items.

Evergreens.—The evergreen situation in the east differs somewhat from that in Ohio. May I just say a few words about taxus. To many viewing the quantity of taxus in eastern nurseries would come immediately the thought of a tremendous overproduction. However, the extensive use of this plant, due to the variety of form, its adaptability to so many landscape uses and its freedom from pests, should cause it to be sold extensively in the near future. While slow-growing, taxus has a more satisfactory color than other evergreens. It is being, and will be more so in the future, substituted for other evergreens and some deciduous plants. The past winter injury has caused taxus to be used more extensively. Many privet hedges are being replaced by the yews. *Taxus media* Hicksii is being grouped and sheared to replace injured formal boxwood specimens. Globe forms are on the increase, and a supply of narrow upright forms to replace Irish juniper and pyramidal arbor-vitæ is assured. With the price somewhat lower, there will be an enormous demand for taxus.

Junipers.—From the observations made, the quantity and variety of junipers are not so extensive as in the midwest. The quality is also inferior. This statement holds true especially with the virginiana and chinensis types. A production schedule of juniper varieties best adapted to different regions should be followed.

Chamaecyparis and thuja.—Conditions appear to vary little with these two genera with the exception of the fact that the quality and variety of *Chamaecyparis obtusa* and its varieties appear to be superior in the east.

Other narrow-leaf evergreens.—Considerable selection and production of hemlock types are being practiced. The cooler climate of the east is more favorable for the development of these plants than the hot, dry periods experienced in the midwest. *Cryptomeria* and *sciadopitys* are being produced and used in considerable quantity. A small increase in dwarf evergreens was apparently noticeable.

Broad-leaf evergreens.—Soil conditions being more favorable than the majority of those in Ohio, an increase in the quantity of ericaceous plants was expected. This was noticeable in the quantity of rhododendrons. Quantities of small plants are being produced under lath shades and in cleared woodland

areas, larger plants occupying blocks in the nurseries. Even with this enormous quantity, nurserymen in the midwest favorably located can profitably produce a limited quantity of rhododendrons.

Other broad-leaf types are not in excess, with the possible exception of boxwood. *Kalmia*, *peris*, *ilex* and others are salable only in limited quantities.

Ground covers and vines.—Very limited quantities of these two items were noticed. The increasing landscape use of ground covers and vines should warrant an increase in the production of these plants. Good, satisfactory types in both of these items are scarce.

Shade trees and fruits.—Little observation was made on these two lines. Shade trees are apparently being produced by relatively few nurserymen. While some are becoming large and crowded, others should move profitably with an increase in building. Fruits are such that an increase in price should be expected.

Such are some of the impressions of a visitor to some eastern nurseries, although, of course, only a small percentage of the existing nurseries was visited. Many new and uncommon plants in nurseries and at the Arnold Arboretum were noticed. These will be mentioned in a later article.

J. H. NICOLAS RECEIVES DEGREE.

Just before starting on his return journey, Dr. J. H. Nicolas, of Newark, N. Y., was called upon to address the graduating class at the famous old University of La Sorbonne, in Paris, and at the conclusion of that function the honorary degree of doctor of natural sciences was conferred on the lecturer.

Dr. Nicolas has been in Europe the past three months on a plant-hunting tour among the famous nurseries of the Old World. He says he feels this is the most interesting trip he ever made and most productive of results. Dr. Nicolas specializes in rose breeding and genetics rose research work at the Jackson & Perkins Co. nurseries and is familiar to the horticultural world generally for his diversified writings on roses. He is the author of "The Rose Manual" and a trustee of the American Rose Society.

CODE COMMITTEE EXPENSE.

(Concluded from page 2.)

amount the American Association of Nurserymen has loaned the code committee \$2800, and there are still expenses to be taken care of. The executive officers of the association feel that this matter is just as much of importance to nonmembers as members and believe that nonmembers should contribute toward the cause, which a good many have already done up to this time. At the convention we secured several pledges running from \$10 to \$100, and the executive officers requested the secretary, upon his return home, to write the nonmembers throughout the country to see if they would not contribute toward this worthy cause. The expenses so far have been mainly borne by the American Association of Nurserymen. On receipt of this letter, won't you kindly give this matter thoughtful consideration and then let us have check for your contribution, making it as large as you can or for an amount consistent with the funds in your treasury? It will be fully appreciated."

Meetings of Nurserymen's Associations

Proposed Marketing Agreement Principal Subject of Discussion at Summer Meetings of State Associations

MEET AT HARRISBURG.

Pennsylvania Association Session.

Nearly 100 members and guests attended the midsummer meeting of the Pennsylvania Nurserymen's Association, held at Harrisburg, Pa., Thursday, August 2.

A large part of the forenoon was devoted to inspecting the Blue Ridge Nurseries as the guests of "Dick" Guldemon, who established the business some fifteen years ago. The nurseries are well located near the William Penn highway, some seven miles east of the city.

After lunch at a hotel not far from the fields the assembled nurserymen adjourned to Breeze Hill Gardens, the residence of Dr. J. Horace McFarland, in Harrisburg, where the business meeting was conducted on the spacious lawn and under the spreading branches of a century-old sycamore and maples and horsechestnuts of lesser years.

To Increase Membership.

The business session was conducted by President Louis U. Strassburger, Philadelphia. The secretary-treasurer, Albert F. Meehan, stated that the association had a substantial balance on deposit, but urged that an effort be made to increase the membership, as only a little over ten per cent of all nurserymen in the state hold membership in the association. The question of adjustment of dues based on volume of sales was discussed, but no action was taken.

Robert Pyle, West Grove, reported on behalf of a special committee appointed to investigate a cooperative nursery display at the 1935 state farm show, which will be held in Harrisburg in January. Earle Renn, of the Berryhill Nursery, Harrisburg, and a member of the committee, stated that a section of the building could be obtained for the display, with a gross area of 1,600 square feet. Nurserymen may secure units of 100 square feet at a lower rate than in 1934. No prizes or awards can be made by the show commission, and only slight

restrictions will be placed on the character of each display. A. E. Wohlert said that he believes that such an exhibit should be undertaken under the auspices of the association, but that the organization should not incur any expense or obligations. Mr. Pyle suggested that the matter be referred to a committee, including Messrs. Renn, Wohlert, Guldemon and Root and Adolf Mueller, and those firms exhibiting at the 1934 show. This action was approved.

Discuss Marketing Agreement.

A code committee appointed at the January meeting consisted of Rhea Elliott, Pittsburgh, and J. H. Humphreys, Chestnut Hill. Because of duties on similar committees, Mr. Humphreys was not able to serve, and A. E. Wohlert was appointed. The chairman presented a report outlining the activities of the committee, its session with the Eastern Nurserymen's Association and also at the recent convention of the A. A. N. A long discussion on the proposed national marketing agreement then took place. The group was by no means agreed on the wisdom of the open price plan, or even on the value of a marketing agreement, although it was agreed that a code or agreement of some kind must be formulated and adopted. Mr. Pyle gave a vivid and enlightening report of the marketing agreement hearing in New York and made clear some of the confused points. He further suggested that the executive officers give special study to the Costich plan as presented to the A. A. N., ascertain how the plan could be applied to the Pennsylvania association and report at the annual meeting in January, 1935.

The discussion brought out that 644 nursery firms are registered with the state department and that forty-six per cent of these firms operate on one acre of land, twenty-three per cent on between one and ten acres and three per cent on ten to twenty acres.

Adjournment was then taken to inspect Breeze Hill Gardens under the guidance of Dr. McFarland and his associates of the Mount Pleasant Press.

WESTERN MAIL-ORDER GROUP.

At a meeting held recently at Shenandoah, Ia., retail nurserymen west of the Mississippi river doing a mail-order business organized what is to be known as the Mail Order Association of Nurserymen, the purposes of which, according to the secretary, are to standardize practices in mail-order retailing, to develop a higher code of ethics and to exchange information which is of general interest in regard to supply of stocks, potential demand, etc.

Officers elected at this meeting were: President, Leslie Sjulín, of the Interstate Nurseries, Hamburg, Ia.; secretary-treasurer, Burke Schriver, of the Earl E. May Seed Co., Shenandoah, Ia. As a member of the executive committee, Earl Ferris, of the Earl Ferris Nurseries, Hampton, Ia., was elected.

Those who are interested in learning more about the association and its program of activities should communicate with the secretary, Burke Schriver.

MEET AT FOND DU LAC, WIS.

The members of the Wisconsin Nurserymen's Association, their families and friends accepted the hospitality of the Baker Nursery & Seed Co. and the city of Fond du Lac and participated in a midsummer meeting and basket picnic at Lakeside park, on the south shore of Lake Winnebago, located within the city limits of Fond du Lac.

A business session was called to order at 11 a.m. by the president, Thomas Pinney, of the Evergreen Nursery Co., Sturgeon Bay.

W. G. McKay, of the McKay Nursery Co., Madison, who was the association's delegate to the convention of the American Association of Nurserymen at New York, gave an interesting and detailed report of that meeting.

Mr. McKay also attended the nurserymen's marketing agreement hearing and voiced the association's opposition to any open price plan that might be presented. Mr. McKay forcefully pointed out the many evils and little good that the nurserymen could gain from any code



Pennsylvania Nurserymen Hold Summer Meeting under Trees at Breeze Hill Gardens, Harrisburg.

or marketing agreement. He also brought out the fact that drought conditions which prevailed throughout the central United States and the curtailed plantings on the part of all nurserymen in the last two years have resulted in shortages in many varieties of fruit stocks and small shrubs, and the ultimate result will be higher prices without any artificial production control on the part of the government.

Wisconsin nurserymen expressed a strong sentiment in opposition to the

code or agreement and prefer to continue on, as in the past, each firm running its own business and solving its own problems.

Every nurseryman who attended this meeting expressed a desire to continue the policy of summer meetings and picnics, and all agree they enjoyed themselves very much. Much credit is due H. J. Baker and L. J. Baker, of the Baker Nursery & Seed Co., for the success of this summer meeting and picnic.

M. C. Hepler, Sec'y-treas.

Coming Meetings

ON THE CALENDAR.

August 21 to 23, National Association of Gardeners, annual convention, Garden City hotel, Garden City, N. Y. Secretary, Mrs. Dorothy E. Hansell, 522 Fifth avenue, N. Y.

August 24 to 26, Ohio Nurserymen's Association, summer meeting, Ruggles hotel, Ruggles Beach, O. Acting secretary, Harry R. O'Brien, Worthington, O.

August 30 and 31, Southern Nurserymen's Association, annual convention, Asheville, N. C. Secretary, W. C. Daniels, Charlotte, N. C.

August 29 to 31, Tenth National Shade Tree Conference and annual meetings of the National Arborists Association and the American Arborists Association, Carnegie Institute, Pittsburgh, Pa. Secretary, Dr. R. P. White, New Jersey Agricultural Experiment Station, New Brunswick, N. J.

September 11 and 12, Pacific Coast Association of Nurserymen, annual convention, Benjamin Franklin hotel, Seattle, Wash. Executive secretary, C. A. Tonneson, Tacoma, Wash.

September 16 to 20, American Institute of Park Executives and American Park Society, annual conventions, Kentucky hotel, Louisville, Ky. Secretary, William Walker, 2234 Inglewood place, South Bend, Ind.

September 20, South Texas Nurserymen's Coöperative Association, Houston, Tex. Secretary, R. H. Bushway, 505 Elgin street, Houston, Tex.

September 24 to 27, Association of American Cemetery Superintendents, Brown hotel, Louisville, Ky. Secretary, W. B. Jones, Highwood Cemetery, 2800 Brighton road, N. S. Pittsburgh, Pa.

September 26 to 29, California Association of Nurserymen, annual convention, Long Beach. Secretary, Henry W. Kruckeberg, 230 South San Pedro street, Los Angeles, Cal.

November 15 to 18, Iowa Nurserymen's Association, fourteenth annual convention; during Little Mid-west Horticultural Exposition, Iowa State College. Secretary, R. S. Herrick, State House, Des Moines, Ia.

SOUTHERN DATE CHANGED.

The annual meeting of the Southern Nurserymen's Association, to be held at the George Vanderbilt hotel, Asheville, N. C., has been changed by one day, so that the dates are now August 30 and 31, according to Secretary W. C. Daniels. Western North Carolina is an excellent place for a summer vacation, and many nurserymen are expected to drive to Asheville and bring their families for the two days' gathering.

OHIO SUMMER MEETING.

Members of the Ohio Nurserymen's Association will convene for their annual summer meeting August 24 to 26 at Ruggles Beach, O. The executive committee will meet at 6 p. m. the first day, while the general sessions are scheduled for the second day. The program for August 25 follows:

AUGUST 25, 9:30 A. M.

Report of secretary-treasurer.
Report of legislative committee, by H. S. Chard, Painesville.

Report on taxation matters.
Report of roadside beautification committee, by W. A. Natorp, Cincinnati.

Report on A. A. N. meeting, with reference to the status of the proposed marketing agreement, by Clarence Siebenhafer, Dayton.

AUGUST 25, 1:30 P. M.

"Effects of Winter Injury and Summer Drought on Nursery Stock," by L. C. Chadwick, Columbus.
Report on winter and drought injury on fruits and small fruits, by Howard N. Scarff, New Carlisle.

Reports on injury in various districts as follows: Cincinnati, C. E. Kern; Miami valley, Thomas Kyle; central Ohio, B. H. Kleinmaier; eastern Ohio, E. N. Jenkins; northwestern Ohio, Harry S. Day, and Painesville, C. H. Shumacker.
Report on revitalization committee of A. A. N., by Herman Brummé, Cincinnati.

CINCINNATI GROUP TO MEET.

August 27, the Greater Cincinnati Nurserymen's Association will hold its summer meeting at Fort Mitchell, Ky., with President Thomas B. Medlyn presiding. The program calls for a report on the code hearing, by Herman Brummé; a report on roadside beautification plans in Ohio for the fall of the present year and in 1935, by W. A. Natorp, and a discussion of plans for the 1935 convention of the A. A. N. in Cincinnati next summer. A banquet and entertainment are being arranged for the group at Fort Mitchell after the business session.

MAIL-ORDER MEETING.

The National Mail-order Nurserymen's Association, which was organized at the meeting June 29 of the Michigan Nurserymen's Association, will hold a meeting September 10 at the Hotel Whitcomb, St. Joseph, Mich., for the adoption of by-laws and a general discussion of stock and prices for the 1934-35 season. All nurserymen doing a mail-order business are urgently solicited by the officers to take part in the proceedings of the meeting. Nurserymen whose business comes under some other classification, as well as members of allied industries, are cordially invited, according to B. W. Keith, secretary and treasurer. The president is Elden H. Burgess, Galesburg, Mich. The members of the executive committee are Frank Beatty, Three Rivers, Mich.; Howard Chard, Painesville, O., and Ralph Emlong, Stevensville, Mich.

CALIFORNIA TRADE PROGRESS.

Few people realize the importance and significance of the commercial plant industry to the industrial and economic life of California. Owing to the era of depression out of which we are groping our way, the gross annual turnover in mere dollars has been much reduced during the present decade, but the bulk of production has not been reduced in a corresponding manner. In other words, sales represent more plant material for the same amount of money. That the industry is holding its own is shown by the record. The state bureau of nursery service, of which J. E. Meriwether is chief, has recently made a compilation of the persons engaged in the nursery industry by counties. This gives the total of licensed establishments handling plant material at 2,256, the total acreage devoted to plant production at 3,499 acres. The counties having the largest number of persons as well as acres engaged are Los Angeles county, with 410 nurseries, utilizing 1,221 acres; San Diego, 127 nurseries and 204 acres; Alameda, 87 nurseries and 510 acres; Santa Clara, 50 nurseries and 166 acres. In a nebulous and speculative way there are those who estimate the gross annual turnover in all classes of plant material in California at about eighteen millions of dollars.

At this season of the year those following the nursery industry in one form or another feel that the industry is between wind and water, hay and grass. On the whole, the season just closed was an improvement on previous years. Though competition was keen and prices somewhat low, considerable quantities of stock were moved, clearing the market of much that might have left a large surplus as a menace for the coming season. Ornamentals were moved by a conservative but encouraging consumer demand. As a result, the average nurseryman with any vision and initiative bearing on salesmanship finds his carry-over small and not a thing to worry over.

Due to low prevailing prices for all kinds of fruit, the demand for fruit trees has been limited almost wholly to replacements. This demand still holds good, but there is a growing tendency to new plantings, particularly in those sections where soil and climate are favorable for fruit culture. Undoubtedly there will be a healthy demand for fruit trees at good prices; particularly is this true of the northern and central parts of the state.

In the way of collective action, a robust coöperation, a trade code and the new deal generally, the California industry put in considerable money, much time and effort to put its house in order, but the net results have not been eminently successful. At the twenty-fourth annual convention of the California Association of Nurserymen, to be held at Long Beach, the whole subject will again assume a major importance; let us hope with tangible as well as lasting beneficial results. The dates are September 26 to 28. The preliminaries for an interesting session are now in a state of incubation. Here's hoping they hatch out well!

IN CALIFORNIA licenses to engage in the nursery business were recently issued to E. M. Meissner, 8217 South Vermont avenue, Los Angeles, and J. Saiyo, 1107 Venice boulevard, Venice.

Answers to Readers' Queries

SHRUBS WITH YELLOW LEAVES.

Can you recommend hardy shrubs that have yellow or silver leaves? They must be able to withstand our severe winters. L. A.—Mich.

Eleagnus angustifolia has leaves that are light green above and silvery beneath. *Eleagnus argentea* has leaves that are silvery on both sides, though rusty dotted beneath. *Caragana arborescens* has gray green foliage. *Physocarpus luteus aureus*, ninebark, has bright yellow leaves at first, becoming bronzy green. There is also a golden elder you might like. The leaves of *Cornus alba* are grayish beneath, while those of *Cornus alba Gouehaultii* are variegated with yellowish white and pink. M.

RASPBERRIES WINTERKILLED.

Our large patch of Latham raspberries was winterkilled last winter; the plants were 6 years old. Is that the limit for Latham? They seem to be subject to crown gall more than anything else. What red raspberry do you recommend? F. J. L.—Wis.

More or less winterkilling occurred in all varieties of raspberries last season, the amount depending upon particular conditions. Probably conditions last summer had as much to do with winterkilling as the conditions during the winter. Latham is probably about as hardy as any variety we have. Chief may be slightly hardier. Of course, some of the varieties which N. E. Hanson, of South Dakota, has developed are somewhat hardier, but they are less satisfactory as regards fruit. Any variety of raspberry is susceptible to crown gall if the soil is infested with it. As to varieties, we would recommend for that section of the state Chief and Latham. Chief has somewhat smaller berries, but of better quality. James G. Moore.

ROSES FOR WISCONSIN.

I have little success with roses here in central Wisconsin. The tea varieties always winterkill. I should like to have a list of good varieties of roses, including the climbing roses that will withstand our severe winters. A. L. S.—Wis.

In the 1928 Rose Annual a list of varieties was suggested by a Milwaukee grower as being suitable in your state. Mention was made there, as in your letter, of the difficulty in handling tea roses. However, it was said that W. R. Smith and Souvenir de Pierre Notting might be grown successfully.

Among the hybrid teas that should be satisfactory with a little care are the following: Gruss an Teplitz, Mme. Caroline Testout, General Superior Arnold Janssen, Radiance, Red Radiance and General MacArthur.

The hybrid perpetuals should include J. B. Clark, George Arends, Ulrich Brunner, Captain Hayward, Magna Charta, Paul Neyron and Frau Karl Druschki, among others.

For climbers, we suggest Silver Moon, American Pillar, Dorothy Perkins, Lady Gay and Hiawatha. M.

CLEMATIS DIES BACK.

What is the matter with my clematis? It seems almost impossible to get them to grow more than two years. They seem to die off and then grow again, and so on. E. L.—N. Y.

You do not say whether it is the small, white-flowered *Clematis paniculata* you are growing or the large-flowered varieties of the Jackmanii type, which come in blue, lavender, white, red and other colors. The latter are all grafted and sometimes die off at the grafts. Use lime freely in the soil for them; give good drainage; either mulch with old manure or partly decayed leaves or grow low annuals or perennials to shade the roots; water in dry weather. The variety *paniculata* grown from seed is usually dependable. C. W.

REPLANTING REGAL LILIES.

I have a bed of regal lilies planted in the spring of 1933. They were just tiny bulbs, and I planted them only four inches deep. Some of them bloomed the first year, but now nearly every one has from one to five flowers. Some have winterkilled—I had them well mulched, but we had an exceptionally bad winter. Some of them are now too close together. Should I lift them this fall and transplant them right away or hold them to be planted in spring? If the latter is preferable, how should they be stored until planting time? How far apart and how deep should I plant them? I do not want to have to take them up again, as I understand the longer they are planted and untouched, the taller the stems will become and the more flowers they will have. When should they be given a feeding? Is bone meal the best food for them? R. F. J.—Mass.

Lift and replant your *Lilium regale* early in October. Cover the larger-sized bulbs eight to nine inches, those of smaller size less and bulbets four inches. While fall is emphatically the best time to replant nearly all lilies, you can extend the blooming season by holding some bulbs over winter packed in dry soil or peat moss and planting in spring. Keep these in a cold cellar which is just above freezing; in fact, it will do the bulbs no harm at all if the temperature falls as low as 20 degrees.

Last winter was a severe one and the first when *Lilium regale* suffered severely. Losses were largely of the biggest bulbs, those of medium or small size surviving much better.

In planting, set the bulbs eight inches apart if of the large size, and they will not need lifting for a few years again. Of course, *regale* makes many bulbets, and on plants undisturbed for several years these will come up thickly, so that three years would really be about as long as you should leave the bulbs without lifting. Old well rotted manure worked in below the bulbs and bone above are good safe foods. C. W.

START STATICE FROM SEEDS.

What is the best way to start the perennial statice, or sea lavender? I had about 100 good 4-year-old plants, but the winter took all but seventeen. I also lost almost 400 peonies, large clumps. The new ones planted last fall and mulched came through the winter well, but the clumps 3 and 4 years old, not mulched, I lost. L. F.—Ia.

Statice, now called *limonium* by botanists, is best started from seeds. In winter under glass is the best time to sow *latifolia*, which is the leading commercial variety. *Dumosa* is a fine one, dwarfier in habit, for the rock garden. You could sow seeds now in a coldframe and let the seedlings stay in the seed bed over winter, planting these out in spring; this would give you some flowers next year. C. W.

COST OF ELECTRICAL PUMPING.

We desire information on the advisability of using an auxiliary water system.

We now have city water, which is not satisfactory because of its lime and magnesium content. We have a large-capacity cistern we anticipate using, turning into it the water from the greenhouse and the residence roofs. Our concern is the cost of pumping with electricity at 6 cents per kilowatt hour.

Another consideration is whether it is possible to have a variable pressure outfit, since watering can well be done at forty pounds' pressure, while spraying overhead should be at around seventy pounds'. The capacity of the outfit need be only enough to supply one ¾-inch hose line, since that is all we ever use in syringing or spraying overhead. We do use two lines sometimes in watering pot plants, but an extremely low pressure would supply two lines under such conditions.

We should also like to know whether a centrifugal pump with a by-pass could be used as economically as an air pressure tank outfit. B. G.—O.

The usual cost of electricity for pumping water is three cents per kilowatt hour and at that price it is not considered excessive. The benefit from having water free from calcium and magnesium should go far to overbalance the extra cost.

While it would require careful adjustment, two lines of hose with different pressures could be taken from a tank carrying the higher pressure. The pipe supplying the line of hose to be used for watering should have a gate valve to shut off the flow when not in use and to control the amount of water entering the hose when watering is going on, varying it so that one or two lines can be operated, and give any desired pressure up to the initial pressure in the tank. This would be a matter of experimenting, but it would only be necessary to note how many turns of the valve are needed under the varying conditions.

A centrifugal pump could be used with a relief valve and would be cheaper to operate than a pressure tank, but it would require more attention.

The Current Season

W. N. Craig's Notes from New England

EFFECTS OF DROUGHT.

The drought which has prevailed this summer seems to be a favorite topic these days. We in the east know happily but little of its ravages, for although we should like to see more precipitation, it cannot be said that losses of nursery stock are at all appreciable. The weather has been hardest on young evergreens planted out late in the spring, and in spite of cultivation and some mulching there are sure to be losses where artificial watering was not possible. Had the real drought started earlier, it would have curtailed sales heavily and caused much heavier losses in transplanted stock. It is not going to be the best of seasons for firms which guarantee every plant they sell to grow, utterly regardless of treatment received.

There was surely never a better season for doing some sprucing up, which far too many nurseries sadly need. There can be absolutely no excuse, short of false economy, for masses of weeds in any plantings.

The growths on evergreens are good and up to the average. Deciduous stock also got a good start before extreme drought started, and with constant cultivation till August, stock is well up to the usual standard.

FRUIT TREES.

For some years the call for fruit trees has been steadily declining. I doubt if there is really a new dollar for an old one for the average retail nurseryman in handling any of them. With many it is simply an accommodation, of which not a few are getting tired. After the past winter, with the lowest readings known in generations, there may come a little change. Especially in northern New England, the toll is a heavy one. Thousands of Baldwin and other apples, many of them a half-century or more old, are dead or dying. McIntosh seemed to stand the severe cold the best of any variety; trees planted but a few years came through in far better shape than the older ones. Great numbers of peaches and plums are dead. Pears seemed to come through better, but they and cherries had flower buds all killed in northern sections. It would seem that, as a result of so much winter killing, there would be more interest in fruit trees the coming fall and spring.

INCARVILLEA DELAVAYI.

We used to consider *Incarvillea Delavayi* as doubtfully hardy, but in recent years it has wintered far better than many supposedly ironclad varieties. We surely thought last winter would see the finish of all plants left outdoors, but all came through smiling and bloomed finely. There is no trouble selling this plant, once buyers have got a glimpse of its large rosy gloxinia-like flowers, which are produced in early June and attain a height of eighteen to twenty-four inches on well established plants. In addition to its value in the garden, this *incarvillea* makes a fine subject for early forcing for spring flower shows. It is

quite easily grown from seeds. There are a number of other members of the *incarvillea* family, but none has attained any great popularity except *Delavayi*; it should be in every collection of hardy perennials.

CLEMATIS DAVIDIANA.

The shrubby *clematis* family as cultivated in gardens is not a large one. *Clematis recta*, the early-flowering white variety, is well known. *C. integrifolia cœrulea* is less seen; it is an interesting plant with porcelain blue flowers, which are now passing. *Davidiana*, much the best of the trio, is just showing color as these notes are written. For August and September blooming, there are few more desirable perennials. It has rich green foliage of great substance, and the flowers, which are tubular, are strongly reminiscent of large blue hyacinths, the shade being lavender, and the fragrance is very pleasing. This plant usually grows two to three feet high, and its blue flowers are welcome at this season, as there are few of this shade in the borders when it is in season. *Clematis Davidiana* can be increased by either seeds or division.

PHLOXES.

With the passing of June there comes a time when there is a marked paucity of flowers in the hardy garden, and from mid-July until late August there is a decided lack of variety. The phloxes may be common, they may not appeal to everyone, but what sad-looking borders we should have during the hottest portion of the year without them! Commencing with *Miss Lingard*, which is unbeatable as an early, and its companion, *Miss Verboom* (often listed as pink, which it hardly is, but all the same it is a useful variety), we come to the main body of this invaluable hardy perennial. Phloxes certainly dislike a hot, dry season, which causes loss of foliage, dwarfing of the plants and the bleaching out of colors. On cool, moist, cloudy days, which have been few and far between this summer, many varieties and especially the so-called blues, lavenders and purples are not at all displeasing, and such varieties as *Caroline Vandenburg*, *Blue Hills*, *Le Mahdi*, *Ethel Pritchard* and *Royal Purple* win our applause just as much as our contempt under a glaring sky.

Pink is easily the most popular color. While *Elizabeth Campbell* still has many admirers, its constitution is poor and many substitutions are made for it. *Enchantress* and *Mrs. Milly van Hoboken* are, in my estimation, much better phloxes. Other good pinks are *Baron von Heeckeren*, with large pips; *Jules Sandeau*, with more of a watermelon shade of pink; *Thor*, which is a good, dependable old variety of a rather deep salmon pink; *Rijnstrom*, which is more rosy, and, last but by no means least, *Daily Sketch*, a light salmon pink with a vivid carmine eye carrying immense trusses and the largest flowers of any member of the phlox family. Seeing this variety in many gardens in Great Britain

and Holland last year, I was thrilled by its lovely color and glorious panicles of flowers. I predict a great popularity for this variety, which is a fairly tall grower and seems to stand drought well.

There is less variety in pure white varieties. *Mia Ruys*, which is rather dwarf in habit, has easily the finest trusses and largest flowers of any pure white and is an excellent midseason variety. The old *Mrs. Jenkins* and *F. G. von Lassburg* are still retained as tall later-flowering whites, but there is room for one with the size of bloom of *Mia Ruys* and double the height. Both *Antoinette Six* and *F. A. Buchner* were fine abroad. Reds burn rather badly under our hot sun and are less favored than pinks, but there is still a fair demand for them by those who have not yet stultified themselves by debarring all red flowers from their gardens. *Saladin* is good in this class and holds its color better than *Coquelicot*; *Camille Schneider* is bright scarlet, with a large truss, while *Deutschland* is also good. In the cherry red class, the old *Beacon* is still in favor. *Marshall Foch* is crimson red, *Eugene Debs*, fiery crimson and quite the best of its color, while *Hindenburg* is a good crimson red.

There are other colors which catch the eyes. Among these, the old *B. Compté*, of a purple satiny shade, is appealing. *R. P. Struthers*, bright rosy carmine with a deeper eye, is still good. *Richard Wallace*, white with a large carmine eye, is another good old sort. In lilac *Anton Mercier* is hard to beat, and *Maid Marion* still has many friends. Varieties which impressed me in Europe last summer were *Sir David Beatty*, deep blue, huge truss; *Dr. Königshofer*, bright orange scarlet; *L. Schlageter*, bright salmon carmine with darker eye, a huge truss, and *General Petain*, deep claret. I doubt if any two growers would agree on the best dozen panicle phloxes. We cannot grow them here as they do abroad, where skies are more subdued and trusses and flowers are of a size and coloring as to make them almost unrecognizable to us. Groups of them at the big British shows, covering as much as 500 square feet, beautifully arranged and with colors well blended, will ever remain pleasing memories.

LOSSES IN LILIES.

For the first time in many years, heavy losses of lily bulbs are reported. In the case of herbs or woody plants, we know these losses earlier than in the case of bulbs, some of which are always late in appearing aboveground. It would seem that America's most popular and widely planted lily, *regale*, suffered the most, as losses are reported from a wide area. Singularly enough, these losses are in nearly all cases in the larger bulbs, the medium and smaller ones surviving. Why this should be does not seem clear at this time. In many plantings, candidum disappeared and there were also heavy killings of both *speciosum* and *auratum*. *Henryi* seems to have come through. We naturally look for some annual losses in Pacific coast varieties, but these were no heavier than usual. It seems singular, however, that such lilies as *sulphureum*, *japonicum* (*Krameri*), *monadelphum*, all forms of *longiflorum*, *washingtonianum*, *maritimum* and many more should survive, while others from colder countries, which we had grown to believe were almost ironclad, should pass out. Incidentally, most

nurserymen are reporting more and more calls for hardy lilies, which a greater number of people are buying each year.

LUPINES.

We ordinarily look upon lupines as June-flowering perennials and of but little account later in the season except for spasmodic splatterings of bloom. Of course, we can greatly extend the flowering season by starting seeds under glass in February, potting the seedlings and planting out in May, or by sowing even as late as mid-April in the open rather thinly in drills and getting from the latter a crop of spikes in the fall. I have a bed that started to flower a few weeks ago from February-sown seeds; these are in a splendid range of colors and include many sweet-scented ones. While early in the season aphids make the flower spikes their headquarters, later in the season they seem rather to pass these by.

Apart from the older colors, blue, pink and white, there are hybrids in yellow, apricot, red, bronze, orange and other intermediate shades. There is no trouble in selling these while in flower, even though it may be unwise at the time to dig the plants. Give lupines plenty of lime, as they do best in a sweet soil.

Last year, on August 10, I saw five acres of beautiful hybrid lupines in a large English nursery, from seed which had been sown in the open in February. Winters there, of course, are quite different from here. The plants averaged five feet high when I saw them and were a glorious spectacle. The crop preceding them had been wheat, and more land of a similar nature was being prepared by tractors to be sown the next season, a green crop being sown and turned in late in the fall.

RUDBECKIAS.

Some forty-two years ago, when Rudbeckia laciniata Golden Glow was introduced, what sensation it caused and what a scramble there was to obtain stock! It was not long before this once highly esteemed plant was receiving more kicks than bouquets, for its facility of increase was such that there was soon a surfeit of it. Yet it is really a good perennial today, and there are occasional calls for it by new garden makers. It would seem that, no matter how good a plant may be, if it increases rapidly and becomes common, people will discard it. Rudbeckia Newmannii, with deep yellow flowers and a darker cone, is a good border perennial and flowers over a long season. How attractive and varied are the hybrids of *R. hirta*! From seeds sown in February plants are now full of flower. *R. maxima* is another good variety, with large, bright yellow flowers, which are produced over a long season. Last, but by no means least, is *R. purpurea* (sometimes called *Echinacea purpurea*), better known as the purple coneflower, although really the petals are not so much purple as pink in color. The cones are large and dark; the individual flowers last remarkably and attain a height of from four to five feet in good soil. This is a splendid border plant, comes easily and abundantly from seeds and should be in every perennial border. Its flowering season spreads over a three months' period, and there can never be any question as to its hardiness.

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ARKANSAS QUARANTINES.

The Arkansas plant board in session at Little Rock on July 26 suspended all its interstate quarantines on nursery stock, effective immediately, as follows: Quarantine No. 5 on chestnut and chinquapin trees from eastern and other states (chestnut blight); quarantine No. 8 on most fruit trees and various other plants from northeastern and certain western states (European red mite); quarantine No. 9 on black walnut trees from certain eastern states (black walnut canker).

The plant board will hereafter attempt to exclude these and other pests from Arkansas by means of a more stringent application of the permit system.

The board will no longer issue permits to ship nursery stock into Arkansas on the basis of the usual blanket certificate of inspection, but will call upon the nursery inspector of the state in which

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the nursery is located for information which will show the true condition of the applicant nursery as to the various pests in question. The board will use this information as a basis for decision as to whether or not permits shall be granted.

Assurance will also be required from the nursery inspector of the state in which the applicant nursery is located that stock objectionable to the board which the applicant nursery might buy from another nursery will not be shipped into Arkansas.

Herbaceous Perennials

Comments on Less Common Varieties

HELLEBORES.

Genus Known for 3,000 Years.

One of the unaccountable facts of horticulture is that, after more than 3,300 years of association with plant students and plant growers, hellebores still remain strangers to most gardeners. The first mention of hellebores in literature that I have found is in the myth wherein the shepherd magician Melampus cured, with this herb, the three daughters of Proetus, King of Argos, of a form of madness which caused them to run naked among the cows in the pasture.

With this as a start, the hellebores gathered to themselves during the succeeding centuries the reputation of curing most of the ills, both real and imaginary, to which humankind is heir. It was a foregone conclusion, too, that their beauty and habit of flowering at a time when practically no other plant dared to venture out would intrigue makers of gardens when that elevating pastime commenced to interest man. Yet, notwithstanding this long friendship with the gardening world, the genus helleborus is still unknown to a large majority of gardeners. And the supply of plants in America is not large enough to enable many to make a personal acquaintance for years to come.

Slow to Propagate.

This scarcity of hellebores is hardly to be accounted for by any difficulty of cultivation, though their slowness of propagation has undoubtedly had some influence in a nation of "Get-Rich-Quick Wallingfords." The commonly grown species, such as *Helleborus niger* and *H. orientalis*, are satisfied with almost any well drained spot, though my experience leads me to think that a moderately heavy loam is better than a light sand. In any case, they will be benefited by a liberal application of leaf mold and well rotted manure, especially as a top-dressing to help conserve soil moisture. All species that I have grown seem best in part shade, and if you are located in the northern states, it will be well to group the plants so they can be covered with a coldframe if you want to enjoy the flowers of the Christmas rose.

Propagation is accomplished by seed-ling or division; possibly, extensive commercial growers have some shorter cuts to rapid multiplication, though I have never heard of any. Seeds should be planted as soon as possible after ripening. They are slow in germination in any case, but fresh seeds should produce blooming-size plants in three years if they have no setbacks. The proper time for dividing the plants for best results is a much mooted question, ranging, according to prejudice or fact (I know not which), from spring until fall. I think, though, that dividing in early spring has the most adherents, but I am not fully convinced that it is the best practice. My own limited experience leads me to think that best

results follow dividing at the time the plants have attained the height of vigor in midsummer.

Two Species in America.

Two species, *H. niger* and *H. orientalis*, and their varieties are the only forms noted in American commerce. The first of these is the more or less familiar Christmas rose, typically a plant eight inches to a foot high, with the basal leaves long-petioled and characteristically palmately divided and with one or two large white flowers (sometimes tinged purple) to the stem. A number of varieties are advertised, though the only one of much importance that I have seen is the one known as *altifolius*. This is truly a glorious plant, taller than the type, with the flowers larger, a diameter of four inches being not uncommon, and I am told that high culture will produce flowers as much as five inches across.

The number of varieties of *H. orientalis* described by botanists would lead one to believe that here we have a highly variable species. The actual variation is not so great as the number of described varieties would lead one to believe. In many of them the supposedly distinctive characteristics are not easy to determine, some being based on more or less minute differences in the color of the sepals. Notwithstanding this, natural variation is wide, and to this has been added the product of plant breeders until we have quite a wide choice of forms. It would be a waste of space to describe the garden varieties which are known to European gardeners, for practically none of them are available in this country. This fact points to a good field for a few specialists in this country to realize on a few years' work. It would probably be well, though, to mention two or three of the natural forms under *H. orientalis*.

Orientalis Group.

H. guttatus, as I grew it from seeds years ago, was a white-flowered form, not spotted with purple crimson dots as mentioned in Bailey's "The Standard Cyclopedia of Horticulture," while its variety *subpunctatus* had faint markings of purple at the base. These were both floriferous plants, more so, I think, than any hellebores I ever grew. I am not sure that I ever had *H. caucasicus*, for the sepals of this form are described as spreading like others of the *orientalis* group, while the sepals of my plant did not spread. The flowers were white, too, while the flowers of *caucasicus* are described as pale green. It is not unlikely that the form I had was *H. c. variety pallidus*. Anyway, it was a good thing and extremely floriferous.

It is probably useless to go on with any more descriptions. I should like to leave the point, however, that in hellebores we have a large group of material little known in America, the culture of which should prove profitable to a number of growers. It will take patience, time and some money to assemble them in quantity, but the venture should be eminently worth while.

AMERICAN NURSERYMAN

LEPACHYS COLUMNARIS.

Although not uncommon, lepacchys, the prairie coneflower, has never had the attention it deserves. It has most of the features we look for in an all-around plant. In rich soil, it gets up to three feet or higher, its delicately cut foliage and its coneflowers over a long period making it a good border plant. A lean soil will keep the plant to rock garden proportions. And it is not to be ignored as cut flower material. If *Lepachys columnaris*, particularly its variety *pulcherrima*, were better known, it would probably be one of our most popular items.

Lepachys columnaris is one of the most easily manipulated plants I have ever handled. It may be treated as an annual or as a perennial. In the first case,

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seeds should be started into growth by early March and the resulting plants should come into flower by the middle of June, continuing to bloom until fall. This makes a quick turnover for the plant grower and gives the gardener color for a long time. Although I have never tried it, I can see no reason why it could not be forced in late winter, thus adding another item to the list of cut flowers for that season.

Why *Lepachys columnaris* is seldom seen as a cut flower in its regular season is hard to understand. The flower itself is unique, consisting of a thimble-like cone an inch high surrounded by six or seven reflexed ray petals, yellow in the case of the type and rich mahogany red in the case of variety *pulcherrima*. Flowers can be cut with a 2-foot stem which will include six inches or more of bare stem below the flower and a number of the finely cut leaves at the lower extremity.

CHAMÆMELUM OREADES.

Under the name of *Chamæmelum oreades*, I have been growing a little white-flowered turfing daisy for the past few years. At first the plant made little favorable impression, but since it was tried in a dry barren spot it has showed its real worth. If a garden has a difficult spot (and what garden does not?) that is well drained, this small creeper will solve the problem of pleasing herbage. The genus is included in *anthesis*.

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by some botanists and in pyrethrum by others, though the best authorities now have it *chamæmelum*.

The plant in question makes a flat mat of ferny leaves, green throughout the year, and seems to be improved by the use of the lawn mower. The floral offering is a small white daisy from May onward. The answer here also is the lawn mower if the flowers are not wanted. The plant's only requirement, so far as I have found, is that of good drainage. The variety is readily multiplied by division of the turfs. My personal opinion of the plant is that, though it is not to be numbered among the choice, it has a definite use for such situations as that mentioned in the foregoing, and its lovely ferny foliage attracts many a customer. It has proved perfectly hardy in northern Michigan.

SUE COUNTY FOR SHRUB BILL.

At Trenton, N. J., Circuit Court Judge Henry E. Ackerson recently held that Hartung Bros., nurserymen of Jersey City, could sue the present Hudson county park commission for payment of a bill of \$2,454 for shrubbery supplied the commission's predecessor, which was ousted by court action some time ago. The firm started suit, but the present commission disclaimed responsibility for the bill; thereupon, the judge ruled that the inhabitants of the county are bound to pay the claim and whether they are sued through the defunct commission, which incurred the bill, or the present body would seem to be a matter of form.

ITALIAN SEED TREE REPORT.

As the harvesting time for tree seeds is near, Arturo Ansaloni sends from Bologna, Italy, his annual report on the supply. Generally speaking, seed production this year is satisfactory and he expects to be able to secure normal quantities. He states:

"Our silver firs, for which a complete failure was recorded last year, show a good setting of cones. The cedars, also, except the deodar, have well fruited and a better crop is to be recorded. *Chamaecyparis Lawsoniana* and its varieties, our native cypresses and the junipers are making a normal crop. For most species of our alpine conifers again this year a much reduced crop is expected. For the different species of native pines whose crop has already been harvested, a normal crop is recorded. Also for the exotic species we report a satisfactory yield. The arbor-vitæ and the yews are making a normal crop.

"For most species of trees and shrubs we shall have a satisfactory crop. Among these we may mention the maples, the various species of clematis, *cercis*, *daphne*, *genista*, *cytisus*, *fraxinus*, *lonicera*, *Magnolia grandiflora* and the deciduous species, *philadelphus*, *pyracantha*, *lilac*, etc. The beech and *Carpinus ostrya* are producing satisfactory crops, while last year we had a complete failure.

"The harvest of fruit seeds is now progressing, and the expectation is fairly good for our true wild Mazzard cherry, apricot and peach. On the contrary we report again this year a rather short crop of *Myrobalan*. Reports reaching us from the producing districts indicate that Mahaleb cherry is also scarce."

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OBITUARY.

Joseph C. Hale.

Joseph C. Hale, proprietor of the J. C. Hale Nursery Co., Winchester, Tenn., died August 8 at Clarksville, Ark., of heat prostration while on a business trip. He was 68 years of age.

Mr. Hale was born in Sauk Center, Minn., in 1866. His father moved to Virginia when he was a child. He went to Tennessee in 1892 and was associated with the Southern Nursery Co., Winchester, for a time. Later he organized what was known as the Tennessee Wholesale Nurseries, one of the largest producers of peach trees. Later the name of the firm was changed to the J. C. Hale Nursery Co.

A Republican, Mr. Hale was one of the party leaders in his state. He served as postmaster at Winchester under Presidents McKinley, Theodore Roosevelt and Harding.

Surviving are his widow, Mrs. Carrie Vaughan Hale, two brothers and two sisters.

Alfred A. Czerr.

Alfred A. Czerr, proprietor of the Painesville Floral Gardens, Painesville, O., died there at the Lake County Memorial hospital August 1 from injuries suffered the evening before when the truck he was driving collided with another automobile.

Mr. Czerr was born at Cleveland in 1891 and attended school in that city. He went to Painesville as a young man and worked in the auditor's office at the courthouse. He was one of the first men

in that community to enlist when the United States entered the World war. After training at various forts, Mr. Czerr was commissioned a lieutenant and in France became senior instructor in the machine gun school at Le Mons. When the war was over, Mr. Czerr returned to a position at the courthouse, giving up political work in 1924, to found the Painesville Floral Gardens. His specialty was the gladiolus, of which he developed some new varieties. About five years ago he also started experimental work with hardy herbaceous plants.

Mr. Czerr was a member of the state and national gladiolus societies and a member of the Masons, the American Legion, several local gun clubs and the Methodist church.

His widow, the former Hazel K. Rafter, to whom he was married in 1920, is continuing the business. Other survivors include his parents, Mr. and Mrs. Fred Czerr; two brothers, and three sisters.

Funeral services were held at the home August 4, with the Rev. Foster C. Anderson, of the Methodist church, officiating and the local post of the American Legion participating in the rites. Burial was at Evergreen cemetery.

Ernest Hutcherson.

Ernest Hutcherson, who established a nursery at Ladner, B. C., in 1881, died at his home at that city July 26, aged 81 years.

He was the first horticulturist at the Ontario Agricultural College, Guelph, Ont., in 1879, and among his students was a man who became Dominion Minister of Agriculture. Mr. Hutcherson gave up his college position in 1880 and first went to California, then traveling north, into British Columbia, where, with Thomas McNeeley, he set out the Jubilee orchard and fruit farm at Ladner, believed to be the first commercial orchard in the province.

Mr. Hutcherson was a founder of the British Columbia Fruit Growers' Association, being especially active in the framing of regulations for the control of fruit pests, and was appointed first fruit pest inspector of British Columbia. In 1908, Mr. Hutcherson went to Australia to frame and enforce a fruit pest act for the state of Western Australia, remaining in that work for ten years, when he returned to Ladner.

Mr. Hutcherson is survived by his widow, a son, three daughters, a brother and a sister.

Carl Sonderegger.

Carl Sonderegger, head of the Sonderegger Nurseries & Seed House, Beatrice, Neb., died July 22, after suffering ill health for about two years.

Mr. Sonderegger was born in Switzerland seventy-eight years ago and was educated in that country. At 19 years of age he came to the United States, purchasing a homestead right to a quarter section near Fairbury, Neb., but as farming was not particularly remunerative, he agreed to sell a neighbor's nursery stock which had not been moving well. Before long Mr. Sonderegger began the production of nursery stock and published a 4-page catalogue, believed to be the first tree catalogue issued west of the Mississippi river.

In 1900, Mr. Sonderegger moved to Beatrice, where he founded the German Nurseries, the name of which he later

AMERICAN NURSEYMAN

changed to the Sonderegger Nurseries & Seed House.

Mr. Sonderegger is survived by his widow, the former Babetta Hohl, who came to the United States from Switzerland to marry him soon after his arrival here, and the following children, Clara, Charles, Fred, Ernest, Hilda, Mrs. Ralph Roszell and Arthur, all of Beatrice; Mrs. Charles Hughes, Fairbury; Leo, Lincoln, and Mrs. Cleo Stevens, North Platte; two brothers, and two sisters. Some of the members of the family are active in the business.

James F. Baker.

James Francis Baker, for several years tree warden of North Kingston, R. I., and one of the best known arborists in southern New England, died August 4, at the South County hospital, Wakefield, R. I., from internal injuries and shock received in an automobile crash a few hours earlier.

He was in his forty-sixth year and had lived at Wickford, R. I., for more than twenty years. He leaves a widow, Mrs. Ellen M. (Gilbin) Baker; two sons, and a daughter. A number of florists and gardeners from southern Rhode Island attended his funeral August 7.

William F. McCord.

William F. McCord, florist, nurseryman and seedsman of Tarrytown, N. Y., died there at Grasslands hospital August 8, after an illness of nearly three years' duration.

Mr. McCord was born at New York city sixty-three years ago, and he went to Tarrytown with his parents forty-five years ago. His first horticultural employment was with Frank R. Pierson, and thirty-six years ago he entered business for himself, with John M. Cooke, Glenville, under the name of Cooke & McCord. The business was started at the present address, on Main street, of the William F. McCord Co., though it has occupied several different quarters.

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HORTICULTURAL BOOKS

Here are listed those found most useful by nurserymen; others can be obtained at publishers' list prices through The American Nurseryman.

Modern Nursery—Laurie and Chadwick.....	\$ 5.00	Cultivated Conifers, The—Bailey.....	\$ 7.50
Landscape Design, Introduction to the Study of—Hubbard and Kimball.....	6.00	Spraying, Dusting and Fumigating of Plants—Mason.....	3.00
American Plants for American Gardens—Roberts and Rehmann.....	2.15	Informal Gardens—Ortloff.....	1.60
Roadside Development—Bennett.....	5.00	Landscape Gardening—Simonds.....	2.65
Principles and Practices of Pruning—Kains.....	2.65	Roses—Rockwell.....	1.10
Rock Garden and Alpine Plants—Correvoon.....	3.00	Azaleas and Camellias—Hume.....	1.65
Pecan Growing—Stucky and Kyle.....	3.15	Lawn, The—Dickinson.....	1.35
Hardy Shrubs—Wauugh.....	1.35	Book of Bulbs, The—Rockwell.....	2.15
Modern Roses—McFarland.....	5.00	Book about Roses, A—Hole.....	1.90
Garden Maintenance—Ortloff and Raymore.....	2.65	Irises—Rockwell.....	1.10
Lilac Culture—Wister.....	1.35	Cherry and Its Culture, The—Gardner.....	1.35
Book of Trees—Hottes.....	3.65	Bush Fruit Production—Van Meter.....	1.35
Book of Shrubs—Hottes.....	3.15	Fertilizers, Handbook of—Gustafson.....	1.35
Shrubs—Rockwell.....	1.10	Tree Fruits, Modern Propagation of—Brown.....	1.65
Hardy Evergreens—Schrepfer.....	1.35	Tree Diseases, Manual of—Rankin.....	3.40
Nut Growing—Morris.....	2.65	Tree and Shrub Insects, Manual of—Felt.....	3.65
Garden Pools—Ramsey and Lawrence.....	2.65	Insects and Diseases of Ornamental Trees and Shrubs—Felt and Rankin.....	5.00
Strawberry, The—Fraser.....	1.35	Bush Fruits—Card.....	2.65
Roadside Marketing—Watts.....	1.35	Gardening in the Lower South—Hume.....	5.00
Pear and Its Culture, The—Tukey.....	1.35	Plant Buyer's Index, The—Manning.....	10.00
Grape Growing, Manual of American—Hedrick.....	3.15	Care of Ornamental Trees, The—Carpenter.....	1.35
Greenhouses; Their Construction and Equipment—Wright.....	2.15	Climbing Roses—Stevens.....	2.15
Practical Landscape Gardening—Cridland.....	2.65	Pioneering with Wildflowers—Aiken.....	2.15
		Plant World in Florida, The—Nehrling.....	3.65
		Cyclopedia of Horticulture—Bailey.....	20.00

Send your remittance with order to

THE AMERICAN NURSERYMAN

508 S. Dearborn St., Chicago, Ill.

CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in this column of The American Nurseryman.]

Edgewood Iris Gardens, Lockport, N. Y.—Price list of iris bulbs offered by Mrs. Bess L. Shippy.

A. M. Grootendorst, Benton Harbor, Mich.—Wholesale price list of bulbs for fall delivery. Included are Michigan-grown tulip bulbs, packaged gladiolus bulbs, peonies, hardy lilies and many miscellaneous bulbous items.

Gormain Seed & Plant Co., Los Angeles, Cal.—California flower seeds for florists and nurserymen. Novelties and recent introductions are well represented. Bides perennials and shrubs there are listings of tree and shrub seeds, ornamental gourd seeds in variety and bulbs for fall planting.

Brooks Systems, Inc., Elkhart, Ind.—Illustrated booklet on the Brooks underground sprinkling equipment for lawns, nurseries, gardens, etc. Features are the subirrigating device, the automatic time clock control and disappearing spray-heads. Illustrations show equipment in use and method of installation.

A. L. Don & Co., Paterson, N. J.—A clearly printed 36-page catalogue, about 4x9 inches, listing bulbs, strawberry plants, summer and greenhouse seeds and greenhouse plants. An inserted leaflet calls attention to Don's new winter-flowering pansies, with 10 to 12-inch stems, grown on plants three to four feet high.

William Borsch & Son, Maplewood, Ore.—Wholesale trade bulletin for fall 1934 and spring 1935 of perennials, especially the rarer kinds. Only items available in quantities are listed. Growers interested in specialities will be particularly interested in the selection. Rock plants make up the major part of the stock.

Hoodacres, Troutdale, Ore.—Charles F. Barber's descriptive booklet on delphiniums, listing plants and seeds of these flowers, as well as of such recommended garden companions as hybrid heucheras and Japanese irises. Other specialties are day lilies and giant campanulas. The edition is especially valuable for its data on delphiniums, which are well illustrated also.

Edward Auten, Jr., Princeville, Ill.—Auten peony offers for 1934, listing this grower's introductions exclusively, in color groups. Included are Japanese, single, semidouble and double types, emphasis being placed on the red varieties, said to be highly satisfactory even in high temperatures. A mimeographed wholesale list accompanies the descriptive circular, as well as offers of irises and lilies.

Garden Nurseries, Narberth, Pa.—Finely prepared booklet entitled "Flowering Trees of the

Orient," consisting of seventy-two pages, of which forty are devoted to descriptive material on flowering cherries, flowering plums and peaches, flowering hawthorns, Chinese flowering crabs, visterias, dogwoods and magnolias. Prices for these and for azaleas, evergreen specialties, deciduous trees and shrubs and ground cover plants are given separately at the back. Half tones and color plates are remarkable throughout.

PUBLICATIONS RECEIVED.

"Some Hybrid Martagon Lilies," by David Griffiths, senior horticulturist of the bureau of plant industry of the United States Department of Agriculture, Washington, D. C. U. S. D. A. circular No. 299 contains fifteen pages plus four full-page half tones and three full-page colored plates. The origin, probable parentage, adaptability, propagation and culture for eleven hybrid Martagon lilies are given. This circular is available from the superintendent of documents, government printing office, Washington, D. C., for 20 cents. Dated December, 1933.

"Strawberry Culture in Wisconsin," by James G. Moore, of the college of agriculture, University of Wisconsin, Madison. Circular No. 268 contains twenty-four pages and is illustrated with half tones and line drawings. Dated March, 1934.

L. H. BLOOM, vice-president of the Sherman Nursery Co., Charles City, Ia., is moving his family to Charles City. Believing that because the drought has killed many plantings there will be an increased demand for nursery stock, the company is planning an intensive sales campaign. The president is J. F. Christiansen, and the secretary-treasurer, C. C. Smith, who is also sales manager.

MINNESOTA NURSERY NOTES.

With a desire to help men who grow and ship fruit in any quantity, the fruit section of the division of horticulture at University Farm, St. Paul, Minn., is conducting experiments in different kinds of containers under varying conditions of cooling and precooling. J. D. Winter, formerly with the state nursery inspection department and now secretary of the Minnesota Fruit Growers' Association, is assisting in the work. The experiments are being conducted in the main at the state fruit-breeding farm, although some work has been done at nurseries in various parts of the state.

Miss Anna M. Streed, proprietor of the Little Elk Gardens, Little Falls, Minn., has had wonderful success with her plantations of ornamental and fruit stock, as a result of the irrigation system partly installed last year and completed this. Miss Streed is also a grower of sweet peas and asters; the latter have been particularly fine this season.

TWO MORE PLANT PATENTS.

According to Rummler, Rummler & Woodworth, Chicago patent lawyers, an avocado and a strawberry were patented August 7, as follows:

100. Avocado. Jennie C. Gano, Whittier, Cal. One claim. An avocado tree bearing a green-colored pear-shaped fruit ripening during the summer months.

101. Strawberry. Edwin P. Wray, White Salmon, Wash. One claim. A strawberry plant bearing fruit characterized by its large to extra-large conic form, its glossy medium dark red color, its toughness of skin, its strong strawberry acid flavor, its earliness, its firmness, its resistance to frost, its canning qualities and its heavy production.

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